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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,484	09/20/2001	Yoshinori Matsumoto	450100-03496	3152

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EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT PAPER NUMBER

2652

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/957,484

Applicant(s)

MATSUMOTO, YOSHINORI

Examiner

Michael V Battaglia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The examiner notes that the claims are drawn to a recording and playback apparatus and method for correcting focusing precision.
3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Verboom et al (hereafter Verboom) (US 5,574,706).

In regard to claim 1, Verboom discloses a recording and playback apparatus for recording data onto a predetermined recording medium and playing back said data from said recording medium, said recording and playback apparatus comprising: judgment means for forming a

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judgment as to whether or not to correct focus precision in an operation to record data onto an Nth track of said recording medium or play back data from said Nth track (Fig. 4, element 104 and Col. 6, lines 15-19); and correction means which is used for correcting said focus precision if said judgment means forms a judgment to correct said focus precision in said operation to record data onto said Nth track of said recording medium or play back data from said Nth track by using a signal representing data existing on an already recorded track closest to said Nth track (Fig. 4, element 164; Col. 6, lines 22-26; and Col. 3, lines 49-59).

In regard to claim 4, Verboom discloses that recording and playback apparatus according to claim 1 wherein said correction means is capable of correcting said focus precision by using a signal played back from an (N - 1)th track immediately preceding said Nth track (Col. 3, lines 49-59). The examiner notes when the Nth track is the immediately following a Standard Format Part (SFP) track, the nearest SFP that is used to correct focus precision will be the (N-1)th immediately preceding said Nth track.

In regard to claim 6, Verboom discloses a recording and playback method for recording data onto a predetermined recording medium and playing back said data from said recording medium, said recording and playback method comprising: a judgment step of forming a judgment as to whether or not to correct focus precision in an operation to record data onto an Nth track of said recording medium or play back data from said Nth track (Col. 6, lines 15-19); and a correction step which is executed for correcting said focus precision if, at said judgment step, a judgment is formed to correct said focus precision in said operation to record data onto said Nth track of said recording medium or play back data from said Nth track by using a signal representing data existing on an already recorded track closest to said Nth track (Col. 6, lines 22-26 and Col. 3, lines 49-59).

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In regard to claim 7, Verboom discloses a recording medium for recording a program to be executed by a computer to record data onto a predetermined recording medium and play back said data from said recording medium, said program comprising: a judgment step of forming a judgment as to whether or not to correct focus precision in an operation to record data onto an Nth track of said recording medium or play back data from said Nth track (Col. 6, lines 15-19); and a correction step which is executed for correcting said focus precision if, at said judgment step, a judgment is formed to correct said focus precision in said operation to record data onto said Nth track of said recording medium or play back data from said Nth track by using a signal representing data existing on an already recorded track closest to said Nth track (Col. 6, lines 22-26 and Col. 3, lines 49-59). The examiner notes that the program of Verboom is inherently recorded on a recording medium. The examiner further notes that even if the program is implemented in hardware, the examiner interprets the circuit board or semiconductor chip as a recording medium on which a function or program is recorded.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verboom in view of Niwayama (US 5,485,443).

Verboom discloses the apparatus of claim 1 that includes a judgment means capable of forming a judgment to correct said focus precision. Verboom does not disclose that the judgment to correct said focus precision is made based on if a predetermined period of time is determined to have lapsed.

Niwayama discloses a judgment means capable of forming a judgment to correct said focus precision if a predetermined period of time is determined to have lapsed (Col. 12, lines 1-5). Niwayama teaches that automatic restoration of an in-focus condition is not always possible due to a decrease in return light caused by an out-of-focus position. By determining if a predetermined period of time has lapsed, focus precision is corrected when automatic restoration fails (Col. 11, lines 51-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the judgment means of Verboom capable of forming a judgment to correct said focus precision if a predetermined period of time is determined to have lapsed as suggested by Niwayama, the motivation being to correct focus precision that cannot be correct by automatic restoration.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verboom in view of Koyama et al (hereafter Koyama) (US 5,517,475).

Verboom discloses the apparatus of claim 1 that includes a judgment means capable of forming a judgment to correct said focus precision. Verboom does not disclose that the judgment to correct said focus precision is made based on if a temperature inside a disk drive setting said recording medium is determined to have increased by a predetermined temperature raise.

Koyama discloses a judgment means capable of forming a judgment to correct said focus precision if a temperature inside a disk drive setting said recording medium is determined to have

increased by a predetermined temperature raise and teaches doing so will correct position shifts of optical parts and a light spot shift caused by temperature change (Fig. 21 and Col. 16, lines 15-39).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the judgment means of Verboom capable of forming a judgment to correct said focus precision if a temperature inside a disk drive setting said recording medium is determined to have increased by a predetermined temperature raise as suggested by Koyama, the motivation being to correct position shifts of optical parts and a light spot shift caused by temperature change.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verboom in view of Tani et al (hereafter Tani) (US 6,574,177).

Verboom discloses the apparatus of claim 1 having a correction means. Verboom does not disclose that the correction means is capable of correcting said focus precision by determining a focus bias value f_d that provides the absolute value of a difference within a threshold value k where said difference is a difference in amplitude or a difference in jitters value between a signal obtained at a focus bias of $(f_d + a)$ and a signal obtained at a focus bias of $(f_d - a)$, and notation a denotes a change quantity.

Tani discloses a correction means capable of correcting said focus precision by determining a focus bias value f_d that provides the absolute value of a difference within a threshold value k where said difference is a difference in amplitude or a difference in jitters value between a signal obtained at a focus bias of $(f_d + a)$ and a signal obtained at a focus bias of $(f_d - a)$, and notation a denotes a change quantity (Fig. 12). The examiner interprets FO of Fig. 12 as f_d and S46 of Fig. 12 as k . The correction means of Tani accurately corrects focus precision so that crosstalk is eliminated and high density reading and recording is possible (Col. 1, lines 45-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the correction means of Verboom with a correction means that determines a focus bias value f_d that provides the absolute value of a difference within a threshold value k where said difference is a difference in amplitude or a difference in jitters value between a signal obtained at a focus bias of $(f_d + a)$ and a signal obtained at a focus bias of $(f_d - a)$ as suggested by Tani, the motivation being to accurately correct focus precision and eliminate crosstalk and successfully accomplish high density reading and recording.

Citation of Relevant Prior Art

8. Furukawa (US 6,628,582) uses a four segment photo detector to detect a focusing error and corrects focus precision without having to read from a different track (Fig. 3). Kiyoura et al. (US 5,757,748) discloses a focus precision correction means that uses a focus bias value plus or minus an offset value to find a best focusing position (Fig. 3).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Battaglia



W. R. YOUNG
PRIMARY EXAMINER